# WHAT IS CLAIMED IS:

1. A compound of formula (I), and the addition salts thereof

$$R3$$
 $N$ 
 $R2$ 
 $(R_1)_n$ 
 $NH_2$ 
 $(I)$ 

- n ranges from 0 to 4, wherein when n is greater than or equal to 2, then the radicals R<sub>1</sub>
   may be identical or different;
- R<sub>1</sub> is chosen from halogen atoms; an onium radical Z; and C<sub>1</sub>-C<sub>8</sub> aliphatic and alicyclic, saturated and unsaturated hydrocarbon-based chains, optionally comprising at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO<sub>2</sub> group, the hydrocarbon-based chains optionally being substituted with a radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>) oxyalkyl, amino, mono(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl, and di(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl radicals; wherein the radical R<sub>1</sub> does not comprise a peroxide bond or diazo, nitro or nitroso radicals;
- R<sub>2</sub> is chosen from an onium radical Z; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carboxyalkyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(alkyl) radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a

C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic, (C<sub>1</sub>-C<sub>4</sub>)alkylcarbonyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxycarbonyl, carbamoyl, mono(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radicals; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and

R<sub>3</sub> is chosen from an onium radical Z; a hydrogen atom; a hydroxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkyloxy radical; an amino radical; a mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a thiol radical; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarboxyl radical; a carbamoyl radical; a  $(C_1-C_4)$ alkylcarbamoyl radical; a di $(C_1-C_4)$ alkylcarbamoyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl,  $(C_1-C_4)$ alkyloxy, amino, mono- $(C_1-C_4)$ alkylamino,  $di(C_1-C_4)alkylamino$ , thiol,  $(C_1-C_4)alkylsulphonic$  and halogen radicals; a  $C_1-C_6$  alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic,  $(C_1-C_6)$ alkylcarbonyl,  $(C_1-C_6)$ alkyloxycarbonyl, carbamoyl, mono $(C_1-C_6)$ alkylcarbamoyl, and di( $C_1$ - $C_6$ )alkylcarbamoyl radicals, and with at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7;

wherein at least one of the groups  $R_2$  and  $R_3$  is chosen from an onium radical Z, wherein the onium radical Z is a nitrogen-based quaternary radical.

- 2. The compound according to claim 1, wherein n is equal to 0 or 1.
- 3. The compound according to claim 1, wherein  $R_1$  is chosen from  $C_1$ - $C_4$  alkyl,  $C_1$ - $C_4$  hydroxyalkyl,  $C_1$ - $C_4$  aminoalkyl,  $C_1$ - $C_4$  alkoxy and  $C_1$ - $C_4$  hydroxyalkoxy radicals.
- 4. The compound of according to claim 3, wherein R<sub>1</sub> is chosen from methyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, isopropyloxy and 2-hydroxyethoxy radicals.
- 5. The compound according to claim 1, wherein  $R_2$  is an onium radical Z and  $R_3$  is chosen from a hydrogen atom, a hydroxyl radical; an amino radical; an amino radical mono- or disubstituted with a radical chosen from  $(C_1-C_6)$ alkyl and  $(C_1-C_6)$ alkylcarbonyl radicals; a carbamoyl radical; and a  $(C_1-C_6)$ alkylsulphonyl radical.
- 6. The compound according to claim 5, wherein  $R_2$  is an onium radical Z and  $R_3$  is chosen from a hydrogen atom.
- 7. The compound according to claim 1, wherein  $R_3$  is an onium radical Z and  $R_2$  is chosen from a  $C_1$ - $C_4$  hydroxyalkyl radical, a carbamoyl radical, a mono ( $C_1$ - $C_4$ )alkylcarbamoyl radical, a di( $C_1$ - $C_4$ )alkylcarbamoyl radical, a carboxyl radical, a ( $C_1$ - $C_4$ )alkyloxycarbonyl radical, a  $C_1$ - $C_4$  aminoalkyl radical, and a  $C_1$ - $C_4$  aminoalkyl radical wherein the amine is mono- or disubstituted with a  $C_1$ - $C_4$  alkyl radical.
  - 8. The compound according to claim 1, wherein R<sub>2</sub> and R<sub>3</sub> are onium radicals Z.
- 9. The compound according to claim 1, wherein the onium radical Z is a compound of formula (II)

- D is a linker arm chosen from a covalent bond and linear and branched C<sub>1</sub>-C<sub>14</sub>
   alkylene chains which optionally comprise at least one hetero atom chosen from
   oxygen, sulphur and nitrogen, are optionally substituted with at least one radical
   chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy and amino radicals, and optionally comprise at
   least one carbonyl function;
- R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub>, taken separately, are chosen from C<sub>1</sub>-C<sub>15</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkoxy-(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; aryl radicals; benzyl radicals; C<sub>1</sub>-C<sub>6</sub> carbamoylalkyl radicals; tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; C<sub>1</sub>-C<sub>6</sub> aminoalkyl radicals; C<sub>1</sub>-C<sub>6</sub> aminoalkyl radicals wherein the amine is mono- or disubstituted with C<sub>1</sub>-C<sub>4</sub> alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, carbamoyl or (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radicals; C<sub>1</sub>-C<sub>6</sub> carboxyalkyl (C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; C<sub>1</sub>-C<sub>6</sub> carbonylalkyl (C<sub>1</sub>-C<sub>6</sub>) alkyl radicals; and C<sub>1</sub>-C<sub>6</sub> carbamoylalkyl (C<sub>1</sub>-C<sub>6</sub>)-N-alkyl radicals;
- R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> together, in pairs, form, with the nitrogen atom to which they are attached a saturated 4-, 5-, 6- or 7-membered carbon-based cationic ring optionally comprising at least one hetero atom, the cationic ring optionally being substituted with a halogen atom and/or with a radical chosen from a hydroxyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radical; a C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radical; a

- $C_1$ - $C_6$  alkoxy radical; a tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radical; a carbamoyl radical; a carboxyl radical; a ( $C_1$ - $C_6$ )alkylcarbonyl radical; a thio radical; a  $C_1$ - $C_6$  thioalkyl radical; a ( $C_1$ - $C_6$ )alkylthio radical; an amino radical; and an amino radical mono- or disubstituted with a radical chosen from ( $C_1$ - $C_6$ )alkyl, ( $C_1$ - $C_6$ )alkylcarbonyl, carbamoyl and ( $C_1$ - $C_6$ )alkylsulphonyl radicals;
- R<sub>7</sub> is chosen from C<sub>1</sub>-C<sub>6</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; aryl radicals; benzyl radicals; C<sub>1</sub>-C<sub>6</sub> aminoalkyl radicals; C<sub>1</sub>-C<sub>6</sub> aminoalkyl radicals wherein the amine is mono- or disubstituted with a radical chosen from (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, carbamoyl and (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radicals; C<sub>1</sub>-C<sub>6</sub> carboxyalkyl radicals; C<sub>1</sub>-C<sub>6</sub> carbamoylalkyl radicals; C<sub>1</sub>-C<sub>6</sub> trifluoroalkyl radicals; tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; C<sub>1</sub>-C<sub>6</sub> sulphonamidoalkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylsulphinyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; N-(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamyl(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; and N-(C<sub>1</sub>-C<sub>6</sub>)alkyl-sulphonamido(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals;

# • x is 0 or 1, wherein:

- when x = 0, then the linker arm D is attached to the nitrogen atom bearing the radicals R<sub>4</sub> to R<sub>6</sub>,
- when x = 1, then two of the radicals R<sub>4</sub> to R<sub>6</sub> form, together with the nitrogen atom to which they are attached, a 4-, 5-, 6- or 7-membered saturated ring and the linker arm D is linked to a carbon atom of the saturated ring; and
- Y is a counterion.
- 10. The compound according to claim 9, wherein x is equal to 0, and  $R_4$ ,  $R_5$  and  $R_6$ , separately, are chosen from  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_4$  monohydroxyalkyl radicals;  $C_2$ -

 $C_4$  polyhydroxyalkyl radicals;  $(C_1-C_6)$ alkoxy $(C_1-C_4)$ alkyl radicals;  $C_1-C_6$  carbamoylalkyl radicals; and tri $(C_1-C_6)$ alkylsilane $(C_1-C_6)$ alkyl radicals; or  $R_4$  and  $R_5$  together form an azetidine, pyrrolidine, piperidine, piperazine or morpholine ring, and  $R_6$  is chosen from  $C_1-C_6$  alkyl radicals;  $C_1-C_6$  monohydroxyalkyl radicals;  $C_2-C_6$  polyhydroxyalkyl radicals;  $C_1-C_6$  aminoalkyl radicals wherein the amine is mono- or disubstituted with a radical chosen from  $(C_1-C_6)$ alkyl,  $(C_1-C_6)$ alkylcarbonyl, carbamoyl and  $(C_1-C_6)$ alkylsulphonyl radicals;  $C_1-C_6$  carbamoylalkyl radicals;  $C_1-C_6$ alkylsilane $(C_1-C_6)$ alkyl radicals;  $(C_1-C_6)$ alkylcarboxy $(C_1-C_6)$ alkyl radicals;  $(C_1-C_6)$ alkylcarbonyl $(C_1-C_6)$ alkyl radicals; and  $N-(C_1-C_6)$ alkylcarbamyl $(C_1-C_6)$ alkyl radicals.

- 11. The compound according to claim 9, wherein x is equal to 1 and  $R_7$  is chosen from  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals;  $C_2$ - $C_6$  polyhydroxyalkyl radicals;  $C_1$ - $C_6$  aminoalkyl radicals;  $C_1$ - $C_6$  aminoalkyl radicals wherein the amine is monoor disubstituted with a radical chosen from  $(C_1$ - $C_6$ )alkyl,  $(C_1$ - $C_6$ )alkylcarbonyl, carbamoyl and  $(C_1$ - $C_6$ )alkylsulphonyl radicals;  $C_1$ - $C_6$  carbamylalkyl radicals;  $tri(C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radicals;  $(C_1$ - $C_6$ )alkylcarboxy( $C_1$ - $C_6$ )alkyl radicals;  $(C_1$ - $C_6$ )alkylcarbonyl( $C_1$ - $C_6$ )alkyl radicals; and  $C_1$ - $C_6$ )alkylcarbamoyl( $C_1$ - $C_6$ )alkyl radicals;  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals;  $C_2$ - $C_6$  polyhydroxyalkyl radicals;  $C_1$ - $C_6$  aminoalkyl radicals,  $C_1$ - $C_6$  aminoalkyl radicals,  $C_1$ - $C_6$  aminoalkyl radicals,  $C_1$ - $C_6$  aminoalkyl radicals;  $C_1$ - $C_6$  alkylcarbonyl radicals;  $C_1$ - $C_6$  alkylsulphonyl radicals;  $C_1$ - $C_6$  carbamylalkyl radicals;  $C_1$ - $C_6$ )alkylsulphonyl radicals;  $C_1$ - $C_6$ 0 alkyl radicals;  $C_1$ - $C_6$ 0 alkylcarboxyl $C_1$ - $C_6$ 0 alkyl radicals;  $C_1$ - $C_6$ 0 alkylcarboxyl $C_1$ - $C_6$ 0 alkyl radicals;  $C_1$ - $C_6$ 0 alkylcarboxyl $C_1$ - $C_6$ 0 alkyl radicals;  $C_1$ - $C_6$ 0 alkylcarboxyl $C_1$ - $C_6$ 0 alkyl radicals.
  - 12. The compound according to claim 1, wherein the onium radical Z is a

trialkylammonium.

- 13. The compound according to claim 1, wherein D is chosen from a single bond and a C<sub>1</sub>-C<sub>8</sub> alkylene chain that is optionally substituted.
- 14. The compound according to claim 1, wherein the onium radical Z is a compound of formula (III)

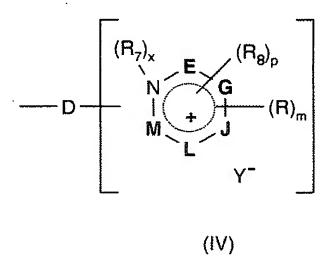
$$-D = \begin{bmatrix} (R_7)_x & E & (R_8)_o \\ N & + & G & (R)_q \\ V & & Y \end{bmatrix}$$
(III)

- D is a linker arm chosen from a covalent bond and linear and branched C<sub>1</sub>-C<sub>14</sub>
   alkylene chains that optionally comprise at least one hetero atom chosen from
   oxygen, sulphur and nitrogen, are optionally substituted with at least one radical
   chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy and amino radicals, and optionally comprise at
   least one carbonyl function;
- the ring members E, G, J and L, which may be identical or different, are chosen from a carbon, oxygen, sulphur and nitrogen atoms to form a ring chosen from pyrrole, pyrazole, imidazole, triazole, oxazole, isoxazole, thiazole and isothiazole rings;
- q is an integer ranging from 1 to 4;
- o is an integer ranging from 1 to 3;
- the sum of q+o is an integer ranging from 2 to 4;
- R, which may be identical or different, is chosen from hydrogen and halogen atoms;

hydroxyl radicals;  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals;  $C_2$ - $C_6$  polyhydroxyalkyl radicals;  $C_1$ - $C_6$  alkoxy radicals;  $tri(C_1$ - $C_6)$ alkylsilane( $C_1$ - $C_6)$ alkyl radicals; carbamoyl radicals; carboxyl radicals;  $C_1$ - $C_6$  alkylcarbonyl radicals; thio radicals;  $C_1$ - $C_6$  thioalkyl radicals; ( $C_1$ - $C_6$ )alkylthio radicals; amino radicals, amino radicals mono- or disubstituted with a radical chosen from ( $C_1$ - $C_6$ )alkyl, ( $C_1$ - $C_6$ )alkylcarbonyl, carbamoyl, and ( $C_1$ - $C_6$ )alkylsulphonyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals; and  $C_2$ - $C_6$  polyhydroxyalkyl radicals; wherein the radicals R are borne by a carbon atom;

- R<sub>8</sub>, which may be identical or different, is chosen from a hydrogen atom; C<sub>1</sub>-C<sub>6</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; C<sub>1</sub>-C<sub>6</sub> carbamoylalkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; and benzyl radicals; wherein the radicals R<sub>8</sub> are borne by a nitrogen atom;
- Proposed from C1-C6 alkyl radicals; C1-C6 monohydroxyalkyl radicals; C2-C6 polyhydroxyalkyl radicals; aryl radicals; benzyl radicals; C1-C6 aminoalkyl radicals, C1-C6 aminoalkyl radicals, C1-C6 aminoalkyl radicals wherein the amine is mono or di substituted with a radical chosen from (C1-C6)alkyl, (C1-C6)alkylcarbonyl, carbamoyl and (C1-C6)alkylsulphonyl radicals; C1-C6 carboxyalkyl radicals; C1-C6 carbamylalkyl radicals; C1-C6 trifluoroalkyl radicals; tri(C1-C6)alkylsilane(C1-C6)alkyl radicals; C1-C6 sulphonamidoalkyl radicals; (C1-C6)alkylcarboxy(C1-C6)alkyl radicals; (C1-C6)-alkylsulphinyl(C1-C6)alkyl radicals; (C1-C6)alkylsulphonyl(C1-C6)alkyl radicals; (C1-C6)alkyl radicals; and N-(C1-C6)alkylsulphonamido(C1-C6)alkyl radicals;
- x is 0 or 1, wherein:

- when x = 0, the linker arm D is attached to the nitrogen atom,
- when x = 1, the linker arm D is attached to one of the ring members E, G, J or
   L; and
- Y is a counterion.
- 15. The compound according to claim 14, wherein the ring members E, G, J and L form a pyrrole, imidazole, pyrazole, oxazole, thiazole or triazole ring.
- 16. The compound according to claim 15, wherein the ring members E, G, J and L form an imidazole ring.
- 17. The compound according to claim 14, wherein x is equal to 0 and D is chosen from a single bond and a C<sub>1</sub>-C<sub>8</sub> alkylene chain optionally substituted.
- 18. The compound according to claim 1, wherein the onium radical Z is a compound of formula (IV)



D is a linker arm chosen from a covalent bond and linear or branched C<sub>1</sub>-C<sub>14</sub>
 alkylene chains that are optionally interrupted with at least one hetero atom chosen
 from oxygen, sulphur and nitrogen atoms, optionally substituted with at least one

- radical chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy and amino radicals, and optionally comprise at least one carbonyl function;
- the ring members E, G, J, L and M, which are identical or different, are chosen from a carbon, oxygen, sulphur and nitrogen atoms and form a ring chosen from pyridine, pyrimidine, pyrazine, triazine and pyridazine rings;
- p is an integer ranging from 1 to 3;
- m is an integer ranging from 1 to 5;
- the sum of p+m is an integer ranging from 2 to 5;
- R, which may be identical or different, is chosen from hydrogen atoms; halogen atoms; hydroxyl radicals; C<sub>1</sub>-C<sub>6</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; C<sub>1</sub>-C<sub>6</sub> alkoxy radicals; tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; carbamoyl radicals; carboxyl radicals; C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl radicals; thio radicals; C<sub>1</sub>-C<sub>6</sub> thioalkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylthio radicals; amino radicals; amino radicals substituted with a radical chosen from (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, carbamoyl and (C<sub>1</sub>-C<sub>6</sub>)alkylsulphonyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; and C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; wherein the radicals R are borne by a carbon atom;
- R<sub>8</sub>, which may be identical or different, is chosen from hydrogen atoms; C<sub>1</sub>-C<sub>6</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub> polyhydroxyalkyl radicals; tri(C<sub>1</sub>-C<sub>6</sub>)alkylsilane(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkoxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; C<sub>1</sub>-C<sub>6</sub> carbamylalkyl radicals; (C<sub>1</sub>-C<sub>6</sub>)alkylcarboxy(C<sub>1</sub>-C<sub>6</sub>)alkyl radicals; and benzyl radicals; wherein the radicals R<sub>8</sub> are borne by a nitrogen atom;
- R<sub>7</sub> is chosen from C<sub>1</sub>-C<sub>6</sub> alkyl radicals; C<sub>1</sub>-C<sub>6</sub> monohydroxyalkyl radicals; C<sub>2</sub>-C<sub>6</sub>
   polyhydroxyalkyl radicals; aryl radicals; benzyl radicals; C<sub>1</sub>-C<sub>6</sub> aminoalkyl radicals;

 $C_1$ - $C_6$  aminoalkyl radicals wherein the amine is mono- or disubstituted with a radical chosen from ( $C_1$ - $C_6$ )alkyl, ( $C_1$ - $C_6$ )alkylcarbonyl, carbamoyl and ( $C_1$ - $C_6$ )alkylsulphonyl radicals;  $C_1$ - $C_6$  carboxyalkyl radicals;  $C_1$ - $C_6$  carbamoylalkyl radicals;  $C_1$ - $C_6$  trifluoroalkyl radicals;  $tri(C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radicals;  $C_1$ - $C_6$  sulphonamidoalkyl radicals; ( $C_1$ - $C_6$ )alkylcarboxy( $C_1$ - $C_6$ )alkyl radicals; ( $C_1$ - $C_6$ )-alkylsulphinyl( $C_1$ - $C_6$ )alkyl radicals; ( $C_1$ - $C_6$ )alkylsulphonyl( $C_1$ - $C_6$ )alkyl radicals; ( $C_1$ - $C_6$ )alkylcarboxy( $C_1$ - $C_6$ )alkyl radicals; ( $C_1$ - $C_6$ )alkylcarboxy( $C_1$ - $C_6$ )alkyl radicals; and  $C_1$ - $C_6$ 0alkylsulphonamido( $C_1$ - $C_6$ 0alkyl radicals;

- x is 0 or 1, wherein:
  - when x = 0, the linker arm D is attached to the nitrogen atom,
  - when x = 1, the linker arm D is attached to one of the ring members E, G, J, L
     or M; and
- Y is a counterion.
- 19. The compound according to claim 18, wherein the ring members E, G, J, L and M form, together with the nitrogen of the ring, a ring chosen from pyridine and pyrimidine rings.
- The compound according to claim 18, wherein x is equal to 0 and R is chosen from hydrogen atoms; hydroxyl radicals;  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals;  $C_2$ - $C_6$  polyhydroxyalkyl radicals;  $C_1$ - $C_6$  alkoxy radicals; tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radicals; carbamoyl radicals;  $C_1$ - $C_6$  alkylcarbonyl radicals; amino radicals; amino radicals mono- or disubstituted with a radical chosen from ( $C_1$ - $C_6$ )alkyl, ( $C_1$ - $C_6$ )alkylcarbonyl, carbamoyl and ( $C_1$ - $C_6$ )alkylsulphonyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals; or  $C_2$ - $C_6$  polyhydroxyalkyl radicals; and  $C_8$  is chosen from hydrogen atoms,  $C_1$ - $C_6$  alkyl radicals,  $C_1$ - $C_6$  monohydroxyalkyl radicals,  $C_2$ - $C_6$

polyhydroxyalkyl radicals, tri( $C_1$ - $C_6$ )alkylsilane( $C_1$ - $C_6$ )alkyl radicals, ( $C_1$ - $C_6$ )alkyl radicals and  $C_1$ - $C_6$  carbamylalkyl radicals.

- 21. The compound according to claim 18, wherein x is equal to 1 and  $R_7$  is chosen from  $C_1$ - $C_6$  alkyl radicals;  $C_1$ - $C_6$  monohydroxyalkyl radicals;  $C_2$ - $C_6$  polyhydroxyalkyl radicals;  $C_1$ - $C_6$  aminoalkyl radicals,  $C_1$ - $C_6$  aminoalkyl radicals wherein the amine is monoor disubstituted with a radical chosen from  $(C_1$ - $C_6)$ alkyl,  $(C_1$ - $C_6)$ alkylcarbonyl, carbamoyl or  $(C_1$ - $C_6)$ alkylsulphonyl radicals;  $C_1$ - $C_6$  carbamoylalkyl radicals;  $tri(C_1$ - $C_6)$ alkylsilane( $C_1$ - $C_6)$ -alkyl radicals;  $(C_1$ - $C_6)$ alkylcarbonyl( $(C_1$ - $C_6)$ alkyl radicals; and N- $(C_1$ - $C_6)$ alkyl radicals,  $(C_1$ - $C_6)$ alkyl radicals,  $(C_1$ - $C_6)$ alkyl radicals,  $(C_1$ - $(C_6)$ alkyl radicals, amino radicals mono- or disubstituted with a radical chosen from  $(C_1$ - $(C_6)$ alkyl,  $(C_1$ - $(C_6)$ alkyl carbonyl, carbamoyl or  $(C_1$ - $(C_6)$ alkylsulphonyl radicals; and  $(C_1$ - $(C_6)$ alkyl, radicals,  $(C_1$ - $(C_6)$ alkyl radicals, and  $(C_1$ - $(C_6)$ alkyl radicals.
- 22. The compound according to claim 18, wherein R and  $R_8$  are chosen from hydrogen atoms and alkyl radicals that are optionally substituted and  $R_7$  is an alkyl radical that is optionally substituted.
  - 23. A nitrophenylene compound of formula (I')

- n ranges from 0 to 4, wherein when n is greater than or equal to 2, then the radicals R<sub>1</sub>
   may be identical or different;
- R<sub>1</sub> is chosen from halogen atoms; an onium radical Z; and C<sub>1</sub>-C<sub>8</sub> aliphatic and alicyclic, saturated and unsaturated hydrocarbon-based chains, optionally comprising at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO<sub>2</sub> group, the hydrocarbon-based chains optionally being substituted with a radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>) oxyalkyl, amino, mono(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl, and di(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl radicals; wherein the radical R<sub>1</sub> does not comprise a peroxide bond or diazo, nitro or nitroso radicals;
- R<sub>2</sub> is chosen from an onium radical Z; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carboxyalkyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(alkyl) radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic, (C<sub>1</sub>-C<sub>4</sub>)alkylcarbonyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxycarbonyl, carbamoyl, mono(C<sub>1</sub>-

- C<sub>4</sub>)alkylcarbamoyl,and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radicals; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and
- R<sub>3</sub> is chosen from an onium radical Z; a hydrogen atom; a hydroxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkyloxy radical; an amino radical; a mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a thiol radical; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarboxyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl,  $(C_1-C_4)$ alkyloxy, amino, mono- $(C_1-C_4)$ alkylamino,  $di(C_1-C_4)alkylamino$ , thiol,  $(C_1-C_4)alkylsulphonic$  and halogen radicals; a  $C_1-C_6$  alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic,  $(C_1-C_6)$ alkylcarbonyl,  $(C_1-C_6)$ alkyloxycarbonyl, carbamoyl, mono $(C_1-C_6)$ alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamoyl radicals, and with at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7;

wherein at least one of the groups  $R_2$  and  $R_3$  is chosen from an onium radical Z, wherein the onium radical Z is a nitrogen-based quaternary radical.

24. A dye composition comprising at least one oxidation base chosen from

compounds of formula (I), and the addition salts thereof

R3
$$R2$$

$$(R_1)_n$$

$$NH_2$$

$$(1)$$

- n ranges from 0 to 4, wherein when n is greater than or equal to 2, then the radicals R<sub>1</sub>
   may be identical or different;
- R<sub>1</sub> is chosen from halogen atoms; an onium radical Z; and C<sub>1</sub>-C<sub>8</sub> aliphatic and alicyclic, saturated and unsaturated hydrocarbon-based chains, optionally comprising at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO<sub>2</sub> group, the hydrocarbon-based chains optionally being substituted with a radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>) oxyalkyl, amino, mono(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl, and di(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl radicals; wherein the radical R<sub>1</sub> does not comprise a peroxide bond or diazo, nitro or nitroso radicals;
- R<sub>2</sub> is chosen from an onium radical Z; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carboxyalkyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(alkyl) radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen

from carboxylic,  $(C_1-C_4)$ alkylcarbonyl,  $(C_1-C_4)$ alkylcarbonyl, carbamoyl, mono( $C_1-C_4$ )alkylcarbamoyl, and di( $C_1-C_4$ )alkylcarbamoyl radicals; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and

R<sub>3</sub> is chosen from an onium radical Z; a hydrogen atom; a hydroxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkyloxy radical; an amino radical; a mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a thiol radical; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarboxyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino,  $di(C_1-C_4)alkylamino$ , thiol,  $(C_1-C_4)alkylsulphonic$  and halogen radicals; a  $C_1-C_6$  alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic,  $(C_1-C_6)$ alkylcarbonyl,  $(C_1-C_6)$ alkyloxycarbonyl, carbamoyl, mono $(C_1-C_6)$ alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamoyl radicals, and with at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7;

wherein at least one of the groups  $R_2$  and  $R_3$  is chosen from an onium radical Z, wherein the onium radical Z is a nitrogen-based quaternary radical.

25. The composition according to claim 24, further comprising at least one

coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalenic couplers and heterocyclic couplers, and the addition salts thereof.

- 26. The composition according to claim 24, further comprising at least one additional oxidation base other than the oxidation bases of formula (I), chosen from paraphenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases, and the addition salts thereof.
- 27. The composition according to claim 26, wherein for the at least one compound of formula (I) and for the at least one additional oxidation base, if present, each oxidation base in the dye composition is present in an amount ranging from about 0.001% to about 10% by weight, relative to the total weight of the dye composition.
- 28. The composition according to claim 26, wherein for the at least one compound of formula (I) and for the at least one additional oxidation base, if present, each oxidation base in the dye composition is present in an amount ranging from about 0.005% to about 6% by weight, relative to the total weight of the dye composition.
- 29. The composition according to claim 25, wherein the at least one coupler is present in the dye composition in an amount ranging from about 0.001% to about 10% by weight, relative to the total weight of the dye composition.
- 30. The composition according to claim 25, wherein the at least one coupler is present in the dye composition in an amount ranging from about 0.005% to about 6% by weight, relative to the total weight of the dye composition.
- 31. The composition according to claim 24, further comprising a cosmetic medium suitable for dyeing human keratin fibers.
- 32. A process for oxidation dyeing of keratin fibers comprising applying to the fibers, in the presence of an oxidizing agent for a time sufficient to develop a desired

coloration, a dye composition comprising at least one oxidation base chosen from compounds of formula (I), and the addition salts thereof

- n ranges from 0 to 4, wherein when n is greater than or equal to 2, then the radicals R<sub>1</sub>
   may be identical or different;
- R<sub>1</sub> is chosen from halogen atoms; an onium radical Z; and C<sub>1</sub>-C<sub>8</sub> aliphatic and alicyclic, saturated and unsaturated hydrocarbon-based chains, optionally comprising at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO<sub>2</sub> group, the hydrocarbon-based chains optionally being substituted with a radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>) oxyalkyl, amino, mono(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl, and di(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl radicals; wherein the radical R<sub>1</sub> does not comprise a peroxide bond or diazo, nitro or nitroso radicals;
- R<sub>2</sub> is chosen from an onium radical Z; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carboxyalkyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a

 $C_1$ - $C_6$  alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic, ( $C_1$ - $C_4$ )alkylcarbonyl, ( $C_1$ - $C_4$ )alkylcarbonyl, carbamoyl, mono( $C_1$ - $C_4$ )alkylcarbamoyl, and di( $C_1$ - $C_4$ )alkylcarbamoyl radicals; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and

R<sub>3</sub> is chosen from an onium radical Z; a hydrogen atom; a hydroxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkyloxy radical; an amino radical; a mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a thiol radical; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarboxyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl,  $(C_1-C_4)$ alkyloxy, amino, mono- $(C_1-C_4)$ alkylamino, di(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic,  $(C_1-C_6)$ alkylcarbonyl,  $(C_1-C_6)$ alkyloxycarbonyl, carbamoyl, mono $(C_1-C_6)$ alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamoyl radicals, and with at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7;

wherein at least one of the groups  $R_2$  and  $R_3$  is chosen from an onium radical Z, wherein the onium radical Z is a nitrogen-based quaternary radical.

- 33. The process according to Claim 32, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxidase enzymes.
- 34. A multi-compartment kit comprising a first compartment comprising at least one dye composition, the dye composition comprising at least one oxidation base chosen from compounds of formula (I), and the addition salts thereof

$$R3$$
 $N$ 
 $R2$ 
 $(R_1)_n$ 
 $NH_2$ 
 $(I)$ 

- n ranges from 0 to 4, wherein when n is greater than or equal to 2, then the radicals R<sub>1</sub>
   may be identical or different;
- R<sub>1</sub> is chosen from halogen atoms; an onium radical Z; and C<sub>1</sub>-C<sub>8</sub> aliphatic and alicyclic, saturated and unsaturated hydrocarbon-based chains, optionally comprising at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and an SO<sub>2</sub> group, the hydrocarbon-based chains optionally being substituted with a radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>) oxyalkyl, amino, mono(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl, and di(C<sub>1</sub>-C<sub>4</sub>)aminoalkyl radicals; wherein the radical R<sub>1</sub> does not comprise a peroxide bond or diazo, nitro or nitroso radicals;
- R<sub>2</sub> is chosen from an onium radical Z; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carboxyalkyl radical;

a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(alkyl) radical; a (C<sub>1</sub>-C<sub>4</sub>)carbamoyl(dialkyl) radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic, (C<sub>1</sub>-C<sub>4</sub>)alkylcarbonyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxycarbonyl, carbamoyl, mono(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radicals; and at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and

• R<sub>3</sub> is chosen from an onium radical Z; a hydrogen atom; a hydroxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkyloxy radical; an amino radical; a mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylamino radical; a thiol radical; a carboxyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarboxyl radical; a carbamoyl radical; a (C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from hydroxyl, (C<sub>1</sub>-C<sub>4</sub>)alkyloxy, amino, mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di(C<sub>1</sub>-C<sub>4</sub>)alkylamino, thiol, (C<sub>1</sub>-C<sub>4</sub>)alkylsulphonic and halogen radicals; a C<sub>1</sub>-C<sub>6</sub> alkyl radical, optionally unsaturated, substituted with at least one radical chosen from carboxylic, (C<sub>1</sub>-C<sub>6</sub>)alkylcarbonyl, (C<sub>1</sub>-C<sub>6</sub>)alkyloxycarbonyl, carbamoyl, mono(C<sub>1</sub>-C<sub>6</sub>) alkylcarbamoyl, and di(C<sub>1</sub>-C<sub>6</sub>)alkylcarbamoyl radicals, and with at least one heterocycle, wherein said at least one heterocycle is saturated or unsaturated, is chosen from nitrogen-containing, oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7 atoms; and at least one heterocycle, wherein said at least one heterocycle is saturated, is chosen from nitrogen-containing.

oxygen-containing and sulphur-containing heterocycles, and comprises at least 4, 5, 6 or 7;

wherein at least one of the groups  $R_2$  and  $R_3$  is chosen from an onium radical Z, wherein the onium radical Z is a nitrogen-based quaternary radical; and a second compartment comprising at least one oxidizing agent.